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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/974,952	10/10/2001	Sue-Hong Chou	YUSO-127	7542

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EXAMINER

PATEL, GAUTAM

ART UNIT	PAPER NUMBER
2655	2

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/974,952

Applicant(s)

CHOU ET AL.

Examiner

Gautam R. Patel

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Claims 1-6 are pending for the examination.

Priority

2. **No** papers have been received for the priority submitted under 35 U.S.C. § 119(a)-(d), therefore priority will **not** be granted at this time.

NOTES & REMARKS

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. For example page 9, line 3 has "is1". It is assumed that typographical error was made. Applicant's cooperation is requested in correcting any errors of which Applicant may become aware in the specification.

4. "The meaning of every term used in any of the claims should be apparent from the descriptive portion of the specification with clear disclosure as to its import; ..." (see 37 CFR § 1.75, MPEP § 608.01(i).

Claim 2, line 3 has an acronym "PUH" that has **not been defined either in the specification or in the claim** first time it appears..

The Applicants are urged to define the term in the specification and claims

While a term used in the claims may be given a special meaning in the description of the invention, generally no term may be given a meaning repugnant to the usual meaning of the term. In re Hill, 161 F.2d 367, 73 USPQ 482 (CCPA 1947).

Corrections are required.

Drawings/Objection

5. The drawings are objected for following reasons:

The drawings are objected to under 37 C.F.R. § 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the steps of reading sync signals, generating an averaged sync signals and comparing the averaged sync signal must be shown or the feature cancelled from the claim. **No new matter should be entered.**

Applicant is required to submit a proposed drawing correction in response to this Office Action. Any proposal by the applicant for amendment of the drawings to cure defects must consist of following:

Drawing changes must be made by presenting replacement figures which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments, or remarks, section of the amendment, and may be **accompanied by a marked-up copy of one or more of the figures being amended, with annotations**. Any replacement drawing sheet **must be identified in the top margin as "Replacement Sheet"** and include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. **Any marked-up (annotated) copy showing changes must be labeled "Annotated Marked-up Drawings" and accompany the replacement sheet in the amendment (e.g., as an appendix).**

Correction is required.

Specification

6. The disclosure is objected for following reasons.

The title of the invention is neither precise nor descriptive. A new title is required which should include, using twenty words or fewer, claimed features that differentiate the invention from the Prior Art. It is recommended that the title should reflect the gist of or the improvement of the present invention.

Correction is required.

Claim Rejections - 35 U.S.C. § 112

7. The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

"an averaged sync signals" required by the claims is not described in the specification. On page 3, lines 9-123 the specification mentions an averaged sync signals but does not explain what these an averaged sync signals are and more importantly how they are being generated. Specification simple states that generation of these signals include determining a rotation frequency and distance between head and center of the disk. Also, it is not clear if this is a "single signal" or they are multiple signals, since sentence starts with "an" averaged, but ends with signals. Also if these are multiple signals how are they different from each other and/or are related to each other. Also how these upper and lower limits of average sync signals are determined. Accordingly, the specification does not explain to one of ordinary skill in the art at the time of the invention, how to generate this averaged sync signal and/or use the invention comprising the claimed "an averaged sync signal".

8. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 5-7 are confusing and unclear. It is not clear at all how these averaged signals are generated and what is meant by "certain rotations of the disk". It is not also clear how the upper and lower limit of these sync signals are generated.

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Claim Rejections - 35 U.S.C. § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 5 is rejected under 35 U.S.C. § 102(b) as being anticipated by Enami et al., US. patent 5,590,105 (hereafter Enami).

As to claim 5, Enami discloses the invention as claimed [see Figs. 1-6, especially 1] including a position detector and a position condition detecting unit, comprising:

a position detector [fig. 1, unit 15] for receiving a frequency variation (FA), a track on success signal (TOS) [fig. 1, out of unit 13 supplies these both signals], and a frequency of disk rotation (FODR) signal [fig.1, signal form unit 14] and outputting a pick-up head ready signal (PLTHRDY) [fig. 1, signal marked "STOP/RETURN CONTROLLING SIGNAL]; and

a position condition detecting unit [fig. 1, unit 14] for receiving a frame synchronous signal (FRAMESYNC) and a disk rotating frequency signal (FODR), and outputting an optic pick-up head position signal [this unit inherently have to have these signals to produce position condition]; wherein the effectiveness of the optic pick-up head position refers to a condition of the pick-up head ready signal [col. 3, line 34 to col. 4, line 23].

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claim 1 [as best understood] is rejected under 35 U.S.C. § 102(e) as being anticipated by Kinoshita et al., US. patent 6,137,757 (hereafter Kinoshita).

As to claim 1, Kinoshita discloses the invention as claimed [see Figs. 1-6, especially 1] including reading sync signals, generating a sync signal and comparing the sync signal, comprising steps of:

- (1) reading sync signals on the disk;
- (2) generating an averaged sync signals in certain rotations of the disk;
- (3) comparing the averaged sync signal with the upper limit and the lower limit to determine a current section where the pick-up head is located [col. 4, lines 21-45 and col. 9, lines 7-45].

Claim Rejections - 35 U.S.C. § 103

11. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2-4 [as best understood] are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kinoshita as applied to claim 1 above and in view of Enami as applied to claim 5 above.

As to claim 2, Kinoshita discloses all of the above elements, including a sync signal and upper and lower limits and comparison of the same with limits. Kinoshita does not specifically disclose details of the sync signal being generated.

However, it is well known in the art that most present day systems use CAV and CLV method of speed control. And that disk drive system and head drive system can

not be controlled separate in the disk which uses CLV method of speed control, and therefore some mechanism is necessary for if one wants to control head drive system and disk drive system separately in a system that uses CLV method.

Also Kinoshita clearly discloses:

generating the averaged sync signals includes: (a) determining a rotation frequency of the disk based on the moving speed of the PUH and the distance between the PUH and a center of disk; and (b) calculating sync signals in certain rotation of the disk [[col. 3, line 34 to col. 4, line 23].

Both Kinoshita and Enami are interested in improving the position detection mechanism of the disk. Both show CAV and CLV method of speed control.

One of ordinary skill in the art at the time of invention would have realized that the system of Kinoshita would have been sensitive to response speed slow down when using CLV method of speed control and it would be advantageous to increase the response speed.

Therefore, it would have been obvious to have used details of sync generation as taught by Enami in the system of Kinoshita, because one would be motivated to increase the response speed of the system [col. 2, lines 3-14; Enami].

12. As to claim 3, Enami discloses:

generating a PUH ready signal indicating the PUH in a steady state, based on a frequency variation signal, a track on success signal and the rotation frequency of the disk[col. 3, line 34 to col. 4, line 23].

13. As to claim 4, Enami discloses:

the PUH ready signal is enabled when the frequency variation state is de-asserted and the track on success signal is asserted. [col. 3, line 34 to col. 4, line 23].

Allowable Subject Matter

14. Claim 6 is objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

NOTE: Claim 6 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose an apparatus which includes optical pick-up which includes a position condition detecting unit for receiving a frame synchronous signal and this condition detecting unit further consist of "a counting unit a position counting unit and a comparing unit". It is noted that the closest prior art, Enami et al. (US 5,590,105) shows a similar apparatus which discloses a position detector and a position condition detecting unit [with different names but performing same function]. However Enami et al. fails to disclose details of the position detecting condition unit.

Other prior art cited

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

- a. Shim et al. (US. patent 6,560,302) Sync detection device ...
- b. Verboom (US. patent 5,270,991) "Track format for use with an optical record carrier..".
- c. Oswald (US. patent 3,593,333) Position detection ..
- d. Nabeshima (US. patent 4,439,849) Rotational speed controlling ..
- e. Bigge (US. patent 5,298,812) "Regulating circuit ...".

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Contact Information

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is (703) 308-7940. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is (703) 872-9314.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To can be reached on (703) 305-4827.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700 or the group Customer Service section whose telephone number is (703) 306-0377.



Gautam R. Patel
Primary Examiner
Group Art Unit 2655

**GAUTAM R. PATEL
PRIMARY EXAMINER**

May 13, 2004